

PERMA-FIX[®]
ENVIRONMENTAL SERVICES, INC

October 13, 2000

Mr. Thomas Manning
Project Manager
Waste Management Branch
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

RE Perma-Fix of Dayton, Inc. (PFD)
EPA ID Number: OHD 004 274 031
RFI Quarterly Progress Report

US EPA RECORDS CENTER REGION 5



1008423

Dear Mr. Manning:

On behalf of Perma-Fix of Dayton, Inc., I am hereby providing to you a copy of the Quarterly Progress Report for RFI activities conducted at the PFD facility in Dayton, Ohio. One copy of the Quarterly Progress report was also submitted to EPA, Region 5 at the address listed in the HSWA Permit.

If you have any questions on this matter, or if you require any additional information, please do not hesitate to contact me at my North Canton, Ohio office. The number there is (330) 498-9750.

Sincerely,
PERMA-FIX ENVIRONMENTAL SERVICES, INC.

Thomas A. Trebonik, PG
Director of Compliance, Safety and Health

cc: Roger Randall, PESI
Jeff Pocisk, PFD
Phil Harris, OEPA

PERMA-FIX[®]
ENVIRONMENTAL SERVICES, INC

October 13, 2000

Waste Management Branch, DRP-8J
Waste, Pesticides and Toxics Division
U.S. EPA, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604
ATTN: OH/MN/WI Section

RE: Perma-Fix of Dayton, Inc. (PFD)
EPA ID Number: OHD 004 274 031
RFI Quarterly Progress Report

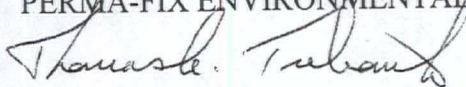
Dear Sir/Ms:

Attached you will find one (1) copy of the Quarterly Progress Report for RFI activities conducted at the above referenced facility. This Quarterly Progress Report has been submitted to this Section in accordance with HSWA Permit Condition I.D.17 for this facility. Please note that one copy has already been provided to Mr. Thomas Manning, Project Manager for Region 5 EPA. One copy has also been provided to Mr. Phil Harris, Project Manager for Ohio EPA.

If there are any questions on this matter, or if any additional information is required, I can be contacted at my North Canton, Ohio office. The telephone number there is (330) 498-9750. My address for written correspondence is:

4041 Batton Street NW
Suite 110
North Canton, Ohio 44720-7145

Sincerely,
PERMA-FIX ENVIRONMENTAL SERVICES, INC.



Thomas A. Trebonik, PG
Director of Compliance, Safety and Health

cc: Mr. Thomas Manning, EPA
Mr. Phil Harris, OEPA
Mr. Roger Randall, PESI
Mr. Jeff Pocisk, PFD

PERMA-FIX[®]
ENVIRONMENTAL SERVICES, INC

October 13, 2000

Mr. Phil Harris
Ohio Environmental Protection Agency
Division of Hazardous Waste Management
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911

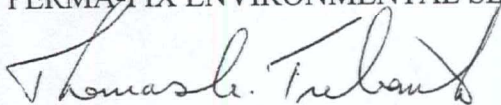
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**QUARTERLY PROGRESS REPORT
RCRA FACILITY INVESTIGATION**

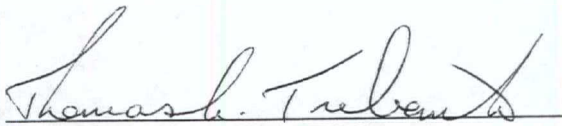
**PERMA-FIX OF DAYTON, INC.
300 South west End Avenue
Dayton, Ohio 45427**

EPA ID Number OHD 004 274 031

October 2000

CERTIFICATION IN ACCORDANCE WITH 40 CFR 270.11(d)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Thomas A. Trebonik, CPGS
Director of Compliance, Safety and Health
Perma-Fix Environmental Services, Inc.

Date: October 13 2000

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ATTACHMENTS

- A. Laboratory Report Form - Geotechnical Analysis of Soil

I. INTRODUCTION

Perma-Fix of Dayton, Inc. (PFD) conducts hazardous waste management activities at its facility located in Dayton, Ohio in accordance with an Ohio Hazardous Waste (RCRA) Permit renewed December 29, 1995 (ID No. OHD 004 274 031) and a final Federal (HSWA) Permit effective February 24, 1996. The HSWA Permit specifically requires development of a RCRA Facility Investigation (RFI) Workplan to conduct investigations of several Solid Waste Management Units (SWMUs) previously identified at the facility.

After numerous conversations, meetings and discussions with personnel at the United States Environmental Protection Agency (US EPA) Region 5 Office in Chicago, Illinois, the RFI Workplan with an associated Quality Assurance Project Plan (QAPjP) was prepared, revised and submitted to the US EPA for final approval. The RFI Workplan and QAPjP were approved by EPA on July 22, 1999.

On-site field data collection activities commenced on January 17, 2000. Soil sampling and analysis activities were completed and the preliminary results were provided to Region V EPA and the Ohio EPA as an Attachment to the first Quarterly Progress Report dated April 2000. In addition to the soil analytical results, data on the ground water levels throughout the facility and the results of a laboratory performance evaluation were also provided.

In accordance with the RFI Workplan and HSWA Permit condition III.F, Perma-Fix of Dayton, Inc. is hereby submitting this Quarterly Progress Report. This Progress Report provides all of the information required to be submitted by the RFI Workplan and HSWA Permit conditions and contains and details the work activity completed during the previous quarter; copies of all pertinent data from the work completed; summaries of all findings; summaries of all problems encountered and actions taken to rectify the problems; and the projected work activity for the next reporting period.

II. RFI WORKPLAN IMPLEMENTATION (Phase I)

II.A Work Activity Completed

Work completed this quarter primarily focused on a review and verification of the analytical data gathered during the first quarter and on preparation of the Draft RFI Final Report and Summary to be submitted to Region V EPA and the Ohio EPA. Preparation of the document (except for minor modifications and finalization of all tables and figures) has been completed, and it is currently undergoing final editorial review.

Additional geotechnical characterization of soil samples collected during the RFI field activities was also conducted. Attachment A presents the laboratory report form for the characterization. Geotechnical analysis of the soil samples included grain size distribution; a determination of the

Plastic and Liquid Limits of the soil; calculation of the Plasticity Index; and classification according to the Unified Soil Classification System. This information has been included in the Draft RFI Report and Summary.

II.B. Changes made to the RFI

There were no changes made to the RFI during this Reporting Period.

II.C. Percent Complete

Based on the original 30-week conceptual schedule for the Perma-Fix of Dayton, Inc. RFI (as modified for problems encountered and discussed in previous Quarterly Reports) it is estimated that the Project is about 95% complete.

II.D. Public Contact

There was no contact made with the general public during this reporting period. As discussed within the Community Relations Plan required for the RFI Workplan, information generated during the RFI process (including the Quarterly Progress Reports) will be placed in the information Repository. It is anticipated at this time that the facility will act as the information repository. A notice will be mailed to interested parties, as identified on the facility mailing list maintained by OEPA, providing details regarding access to the information repository.

II.E. Changes in Personnel

There have been no changes in personnel during this quarter which require reporting. Personnel changes were reported in past Quarterly Reports. All key personnel responsible for implementation of the RFI remain the same.

II.F. Problems Encountered

There have been no problems encountered during this reporting period.

II.G. Reports and Data generated during the reporting Period

Other than the attachment included with this Quarterly Progress Report, no other reports have been generated during this reporting period.

III. PROJECTED WORK

Projected work activities anticipated for the next reporting period include finalizing the Draft RFI Report and Summary; providing opportunity for facility Management review; and finalizing and producing (printing, collating and binding) the Draft report. All data will be compiled into the Draft RFI Final Report and Summary to be submitted to Region 5 EPA and the Ohio EPA. Allowing for adequate time to schedule and complete the activities identified, it is anticipated that the Draft RFI Report and Summary will be submitted to Region 5 EPA and the Ohio EPA within two to three weeks.

ATTACHMENT A

Laboratory Report Form - Geotechnical Analysis of Soil

Area Offices3400 N. Lincoln Blvd.
902 Trails West Loop
900 SE SecondOklahoma City, OK 73105
Enid, OK 74704
Lawton, OK 73501(405)528-0541
(580) 237-3130
(580)353-0872

Project No.: 2100-2210

Report Date: October 3, 2000

Client: Perma-Fix Environmental

Project: Perma-Fix of Dayton, Inc RFI

Contractor: Perma-Fix Environmental

Date Recieved:

September 25, 2000

Sampled by:

Client

By Order of:

Thomas Trebonik

REPORT: Soil Classification

LAB NO.:

34377

Specification:

Test Method:

ASTM D2487

TEST RESULTS

PAGE 1 OF 2

Sample ID	SWMU 30/31	SWMU 32	SWMU 32	SWMU 34	SWMU 39	SWMU 39
Station	2	1	1	2	1	1
Depth	2-4'	4-8'	8-11'	6-8'	1-4'	8-12'
% Passing Sieve						
#10	99.5	94.4	85.7	90.5	99.5	92.6
#40	96.2	---	---	76.0	91.6	89.0
#100	86.3	---	---	69.0	88.2	70.9
#200	71.9	---	---	52.1	85.5	63.3
Liquid Limit	41	26	25	24	37	21
Plastic Limit	17	15	14	12	18	14
Plasticity Index	24	11	11	16	19	7
Unified Classification	CL	CL	CL	CL	CL	CL-ML
Soil Description	Grayish brown sandy clay	Tannish gray sandy, silty clay	Gray sandy clay	Tannish gray, sandy clay	Tannish gray sandy clay	Tannish gray sandy, silty clay

Project No.: 2100-2210
Report Date: October 3, 2000 Date Recieved: September 25, 2000
Client: Perma-Fix Environmental Sampled by: Client
Project: Perma-Fix of Dayton, Inc RFI By Order of: Thomas Trebonik
Contractor: Perma-Fix Environmental
REPORT: Soil Classification LAB NO.: 34377

Specification: Test Method: ASTM D2487

TEST RESULTS**PAGE 2 OF 2**

Sample ID	SWMU 39	SWMU 33/45	SWMU 33/45/A	SWMU 33/45/A	SWMU 34/45/A	SWMU 33/45/A
Station	2	1	1	1	1	2
Depth	8.5-9'	0-4'	4-8'	8-12'	12-15'	4-8'
% Passing Sieve						
#10	90.4	88.5	94.6	84.3	93.7	93.9
#40	71.7	72.6	89.6	71.0	77.5	87.6
#100	55.1	---	78.9	---	66.4	81.6
#200	46.0	---	71.5	---	59.5	77.4
Liquid Limit		31	22	23	26	28
Plastic Limit		16	13	12	13	14
Plasticity Index	~10	15	9	11	13	14
Unified Classification	SC	CL	CL	CL	CL	CL
Soil Description	Tan clayey sand	Tannish gray sandy clay	Tannish gray sandy clay	Tannish gray sandy clay	Tannish gray sandy clay	Tannish gray sandy clay

Respectfully submitted,
STANDARD TESTING & ENGINEERING COMPANY



Farid Ahmad, MSCE, E. I.
Manager of Tulsa Operations

PERMA-FIX[®]
ENVIRONMENTAL SERVICES, INC.

RECEIVED
OCT 17 2000

October 13, 2000

Waste Management Branch, DRP-8J
Waste, Pesticides and Toxics Division
U.S. EPA, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604
ATTN: OH/MN/WI Section

MNOHWI PERMIT SECTION - WMB
Waste, Pesticides & Toxics Division
U.S. EPA - REGION 5

RE: Perma-Fix of Dayton, Inc. (PFD)
EPA ID Number: OHD 004 274 031
RFI Quarterly Progress Report

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If there are any questions on this matter, or if any additional information is required, I can be contacted at my North Canton, Ohio office. The telephone number there is (330) 498-9750. My address for written correspondence is:

4041 Batton Street NW
Suite 110
North Canton, Ohio 44720-7145

Sincerely,
PERMA-FIX ENVIRONMENTAL SERVICES, INC.



Thomas A. Trebonik, PG
Director of Compliance, Safety and Health

cc: Mr. Thomas Manning, EPA
Mr. Phil Harris, OEPA
Mr. Roger Randall, PESI
Mr. Jeff Pocisk, PFD

Zary → Hak

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ENVIRONMENTAL SERVICES, INC.

July 13, 2000

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U.S. EPA, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604
ATTN: OH/MN/WI Section

RECEIVED
JUL 19 2000

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U.S. EPA - REGION 5

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Director of Compliance, Safety and Health

cc: Mr. Thomas Manning, EPA
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**QUARTERLY PROGRESS REPORT
RCRA FACILITY INVESTIGATION**

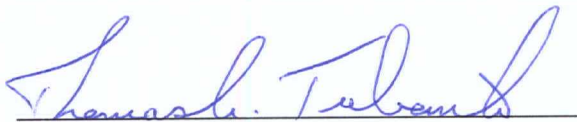
**PERMA-FIX OF DAYTON, INC.
300 South west End Avenue
Dayton, Ohio 45427**

EPA ID Number OHD 004 274 031

July 2000

CERTIFICATION IN ACCORDANCE WITH 40 CFR 270.11(d)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Thomas A. Trebonik, CPGS
Director of Compliance, Safety and Health
Perma-Fix Environmental Services, Inc.

Date: July 13, 2000

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ATTACHMENTS

A.	Surveying Data on Ground-water Wells	A-1
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I. INTRODUCTION

Perma-Fix of Dayton, Inc. (PFD) conducts hazardous waste management activities at its facility located in Dayton, Ohio in accordance with an Ohio Hazardous Waste (RCRA) Permit renewed December 29, 1995 (ID No. OHD 004 274 031) and a final Federal (HSWA) Permit effective February 24, 1996. The HSWA Permit specifically requires development of a RCRA Facility Investigation (RFI) Workplan to conduct investigations of several Solid Waste Management Units (SWMUs) previously identified at the facility.

After numerous conversations, meetings and discussions with personnel at the United States Environmental Protection Agency (US EPA) Region 5 Office in Chicago, Illinois, the RFI Workplan with an associated Quality Assurance Project Plan (QAPjP) was prepared, revised and submitted to the US EPA for final approval. The RFI Workplan and QAPjP were approved by EPA on July 22, 1999.

On-site field data collection activities commenced on January 17, 2000. Soil sampling and analysis activities were completed and the preliminary results were provided to Region V EPA and the Ohio EPA as an Attachment to the first Quarterly Progress Report dated April 2000. In addition to the soil analytical results, data on the ground water levels throughout the facility and the results of a laboratory performance evaluation were also provided.

In accordance with the RFI Workplan and HSWA Permit condition III.F, Perma-Fix of Dayton, Inc. is hereby submitting this Quarterly Progress Report. This Progress Report provides all of the information required to be submitted by the RFI Workplan and HSWA Permit conditions and contains and details the work activity completed during the previous quarter; copies of all pertinent data from the work completed; summaries of all findings; summaries of all problems encountered and actions taken to rectify the problems; and the projected work activity for the next reporting period.

II. RFI WORKPLAN IMPLEMENTATION (Phase I)

II.A Work Activity Completed

Work completed this quarter primarily focused on a review and verification of the analytical data gathered during the first quarter and on preparation of the Draft RFI Final Report and Summary to be submitted to Region V EPA and the Ohio EPA. Surveying to determine the location and elevation of facility ground-water wells was completed. The data is included in Attachment A for review. Source characterization and potential receptor identification activities were also conducted during this reporting period.

II.B. Changes made to the RFI

There were no changes made to the RFI during this Reporting Period.

II.C. Percent Complete

Based on the original 30-week conceptual schedule for the Perma-Fix of Dayton, Inc. RFI and the problems encountered as discussed in Section II.F of this Quarterly Progress Report, it is estimated that the Project is about 60-65% complete.

II.D. Public Contact

There was no contact made with the general public during this reporting period. As discussed within the Community Relations Plan required for the RFI Workplan, information generated during the RFI process (including the Quarterly Progress Reports) will be placed in the information Repository. It is anticipated at this time that the facility will act as the information repository. A notice will be mailed to interested parties, as identified on the facility mailing list maintained by OEPA, providing details regarding access to the information repository.

II.E. Changes in Personnel

Effective April 10, 2000, Mr. Ed Van Schaik, (identified as one of the Key Personnel in the completion of the Perma-Fix of Dayton, Inc. RFI) is no longer employed by Perma-Fix Engineering. Mr. Van Schaik is now employed by ARCADIS Geraghty & Miller. All other key personnel identified as responsible for implementation of the RFI and their employers remain the same.

II.F. Problems Encountered

The only problem encountered during this Reporting Period involved the change in employment status of certain Key Personnel as described above. Contractual arrangements between Perma-Fix Environmental Services, Inc. and ARCADIS Geraghty & Miller to continue to utilize the services of Mr. Van Schaik in the completion of the Perma-Fix of Dayton, Inc. RFI have been completed and the work has recommenced. It is estimated however, that the impact of the change has resulted in a 30- to 60-day delay in the completion and submittal of the Draft RFI Final Report and Summary.

II.G. Reports and Data generated during the reporting Period

Other than the attachment included with this Quarterly Progress Report, no other reports have been generated during this reporting period.

III. PROJECTED WORK

Projected work activities anticipated for the next reporting period include continuing to establish the environmental and hydro-geologic setting and general soil conditions of the site. Work will also be conducted to finalize source characterization and potential receptor identification. All data will be compiled into the Draft RFI Final Report and Summary to be submitted to Region 5 EPA and the Ohio EPA.

ATTACHMENT A

Survey Data for Perma-Fix of Dayton, Inc. Ground-water Wells



Woolpert Fax

If you do not receive the number of pages listed below,
please call sender or Woolpert at 937.461.5660

To:	Thomas Trebonik	From:	Chris Harmon
Company:	Perma-Fix Environmental Services, Inc.	Department:	Survey/GPS
Fax Number:	(330) 498-9751	Order Number:	58036-01-106
Pages Sent:	3 (Including cover page)	Date:	May 9, 2000

Notes:

Please find attached the Horizontal and Vertical locations for the monitoring well locations on the EPS and Perma-Fix sites in Dayton OH.

The baseline established for the Perma-Fix site was based on being parallel and 162' West of the East chainlink fence on said site. We have supplied ties to identified building corners to assist in correctly inserting the well locations into the existing CADD drawing of the site.

I appreciate the opportunity to provide this service to your company and if you have any questions or comments please contact me.

Sincerely,

Chris Harmon, P.S.

WOOLPERT LLP
409 East Monument Avenue • Dayton, Ohio 45402-1261
937.461.5660 • Fax 937.461.0743 • www.woolpert.com

Perma-Fix Of Dayton Main Facility Monitoring Well Locations of April 2000

<u>Pt. No.</u>	<u>Northing</u>	<u>Easting</u>	<u>Elevation</u>	<u>Description</u>	<u>Well No.</u>
100	5000	5000	970.55	PK Nail Set	
101	5365.198	5044.832		PK Nail Set	
1000	5097.514	4928.902		NE Corner of Building "G"	
1001	4958.302	4908.807		SE Corner of Building "G"	
1005	5409.45	5007.836		NE Corner of Building "E"	
1006	5269.828	4989.867		SE Corner of Building "E"	
1002	4808.884	4812.373	962.66 962.54 960.17	Top of Well Protector Top of Well Casing Ground Elev.	CPGM 1
1003	4809.565	5105.495	961.67 961.42 959.38	Top of Well Protector Top of Well Casing Ground Elev.	CPGM 2
1007	5356.994	5194.304	964.03 963.77 961.65	Top of Well Protector Top of Casing Ground Elev.	CPGM 3

Coordinates used hereon are assumed

Elevations are based on Montgomery County Benchmark No. 269

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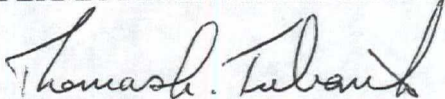
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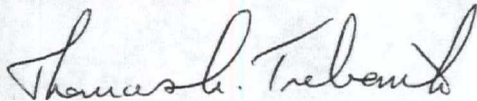
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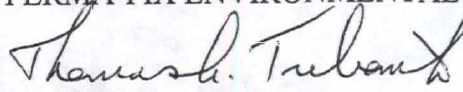
Dear Sir/Ms:

Attached you will find one (1) copy of the Quarterly Progress Report for RFI activities conducted at the above referenced facility. This Quarterly Progress Report has been submitted to this Section in accordance with HSWA Permit Condition I.D.17 for this facility. Please note that one copy has already been provided to Mr. Thomas Manning, Project Manager for Region 5 EPA. One copy has also been provided to Mr. Phil Harris, Project Manager for Ohio EPA.

If there are any questions on this matter, or if any additional information is required, I can be contacted at my North Canton, Ohio office. The telephone number there is (330) 498-9750. My address for written correspondence is:

4041 Batton Street NW
Suite 110
North Canton, Ohio 44720-7145

Sincerely,
PERMA-FIX ENVIRONMENTAL SERVICES, INC.


Thomas A. Trebonik, PG
Director of Compliance, Safety and Health

cc: Mr. Thomas Manning, EPA
Mr. Phil Harris, OEPA
Mr. Roger Randall, PESI
Mr. Jeff Pocisk, PFD

**QUARTERLY PROGRESS REPORT
RCRA FACILITY INVESTIGATION**

PERMA-FIX OF DAYTON, INC.

300 South west End Avenue

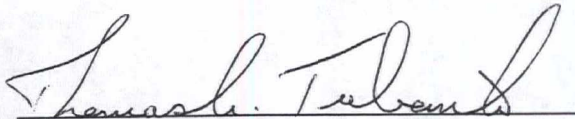
Dayton, Ohio 45427

EPA ID Number OHD 004 274 031

July 2000

CERTIFICATION IN ACCORDANCE WITH 40 CFR 270.11(d)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Thomas A. Trebonik, CPGS
Director of Compliance, Safety and Health
Perma-Fix Environmental Services, Inc.

Date: July 13, 2000

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II.C.	Percent Complete	2
II.D.	Public Contact	2
II.E.	Changes in Personnel	2
II.F.	Problems Encountered	2
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ATTACHMENTS

A.	Surveying Data on Ground-water Wells	A-1
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I. INTRODUCTION

Perma-Fix of Dayton, Inc. (PFD) conducts hazardous waste management activities at its facility located in Dayton, Ohio in accordance with an Ohio Hazardous Waste (RCRA) Permit renewed December 29, 1995 (ID No. OHD 004 274 031) and a final Federal (HSWA) Permit effective February 24, 1996. The HSWA Permit specifically requires development of a RCRA Facility Investigation (RFI) Workplan to conduct investigations of several Solid Waste Management Units (SWMUs) previously identified at the facility.

After numerous conversations, meetings and discussions with personnel at the United States Environmental Protection Agency (US EPA) Region 5 Office in Chicago, Illinois, the RFI Workplan with an associated Quality Assurance Project Plan (QAPjP) was prepared, revised and submitted to the US EPA for final approval. The RFI Workplan and QAPjP were approved by EPA on July 22, 1999.

On-site field data collection activities commenced on January 17, 2000. Soil sampling and analysis activities were completed and the preliminary results were provided to Region V EPA and the Ohio EPA as an Attachment to the first Quarterly Progress Report dated April 2000. In addition to the soil analytical results, data on the ground water levels throughout the facility and the results of a laboratory performance evaluation were also provided.

In accordance with the RFI Workplan and HSWA Permit condition III.F, Perma-Fix of Dayton, Inc. is hereby submitting this Quarterly Progress Report. This Progress Report provides all of the information required to be submitted by the RFI Workplan and HSWA Permit conditions and contains and details the work activity completed during the previous quarter; copies of all pertinent data from the work completed; summaries of all findings; summaries of all problems encountered and actions taken to rectify the problems; and the projected work activity for the next reporting period.

II. RFI WORKPLAN IMPLEMENTATION (Phase I)

II.A Work Activity Completed

Work completed this quarter primarily focused on a review and verification of the analytical data gathered during the first quarter and on preparation of the Draft RFI Final Report and Summary to be submitted to Region V EPA and the Ohio EPA. Surveying to determine the location and elevation of facility ground-water wells was completed. The data is included in Attachment A for review. Source characterization and potential receptor identification activities were also conducted during this reporting period.

II.B. Changes made to the RFI

There were no changes made to the RFI during this Reporting Period.

II.C. Percent Complete

Based on the original 30-week conceptual schedule for the Perma-Fix of Dayton, Inc. RFI and the problems encountered as discussed in Section II.F of this Quarterly Progress Report, it is estimated that the Project is about 60-65% complete.

II.D. Public Contact

There was no contact made with the general public during this reporting period. As discussed within the Community Relations Plan required for the RFI Workplan, information generated during the RFI process (including the Quarterly Progress Reports) will be placed in the information Repository. It is anticipated at this time that the facility will act as the information repository. A notice will be mailed to interested parties, as identified on the facility mailing list maintained by OEPA, providing details regarding access to the information repository.

II.E. Changes in Personnel

Effective April 10, 2000, Mr. Ed Van Schaik, (identified as one of the Key Personnel in the completion of the Perma-Fix of Dayton, Inc. RFI) is no longer employed by Perma-Fix Engineering. Mr. Van Schaik is now employed by ARCADIS Geraghty & Miller. All other key personnel identified as responsible for implementation of the RFI and their employers remain the same.

II.F. Problems Encountered

The only problem encountered during this Reporting Period involved the change in employment status of certain Key Personnel as described above. Contractual arrangements between Perma-Fix Environmental Services, Inc. and ARCADIS Geraghty & Miller to continue to utilize the services of Mr. Van Schaik in the completion of the Perma-Fix of Dayton, Inc. RFI have been completed and the work has recommenced. It is estimated however, that the impact of the change has resulted in a 30- to 60-day delay in the completion and submittal of the Draft RFI Final Report and Summary.

II.G. Reports and Data generated during the reporting Period

Other than the attachment included with this Quarterly Progress Report, no other reports have been generated during this reporting period.

III. PROJECTED WORK

Projected work activities anticipated for the next reporting period include continuing to establish the environmental and hydro-geologic setting and general soil conditions of the site. Work will also be conducted to finalize source characterization and potential receptor identification. All data will be compiled into the Draft RFI Final Report and Summary to be submitted to Region 5 EPA and the Ohio EPA.

ATTACHMENT A

Survey Data for Perma-Fix of Dayton, Inc. Ground-water Wells



Woolpert Fax

If you do not receive the number of pages listed below,
please call sender or Woolpert at 937.461.5660

To: Thomas Trebonik

From: Chris Harmon

Company: Perma-Fix Environmental
Services, Inc.

Department: Survey/GPS

Fax Number: (330) 498-9751

Order Number: 58036-01-106

Pages Sent: 3
(Including cover page)

Date: May 9, 2000

Notes:

Please find attached the Horizontal and Vertical locations for the monitoring well locations on the EPS and Perma-Fix sites in Dayton OH.

The baseline established for the Perma-Fix site was based on being parallel and 162' West of the East chainlink fence on said site. We have supplied ties to identified building corners to assist in correctly inserting the well locations into the existing CADD drawing of the site.

I appreciate the opportunity to provide this service to your company and if you have any questions or comments please contact me.

Sincerely,

Chris Harmon, P.S.

WOOLPERT LLP
409 East Monument Avenue • Dayton, Ohio 45402-1261
937.461.5660 • Fax 937.461.0743 • www.woolpert.com

Perma-Fix Of Dayton Main Facility Monitoring Well Locations of April 2000

<u>Pt. No.</u>	<u>Northing</u>	<u>Easting</u>	<u>Elevation</u>	<u>Description</u>	<u>Well No.</u>
100	5000	5000	970.55	PK Nail Set	
101	5365.198	5044.832		PK Nail Set	
1000	5097.514	4928.902		NE Corner of Building "G"	
1001	4958.302	4908.807		SE Corner of Building "G"	
1005	5409.45	5007.836		NE Corner of Building "E"	
1006	5269.828	4989.867		SE Corner of Building "E"	
1002	4808.884	4812.373	962.66 962.54 960.17	Top of Well Protector Top of Well Casing Ground Elev.	CPGM 1
1003	4809.555	5105.495	961.67 961.42 959.38	Top of Well Protector Top of Well Casing Ground Elev.	CPGM 2
1007	5356.994	5194.304	964.03 963.77 961.65	Top of Well Protector Top of Casing Ground Elev.	CPGM 3

Coordinates used hereon are assumed

Elevations are based on Montgomery County Benchmark No. 269

PERMA-FIX[®]
ENVIRONMENTAL SERVICES, INC

July 13, 2000

Mr. Phil Harris
Ohio Environmental Protection Agency
Division of Hazardous Waste Management
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911

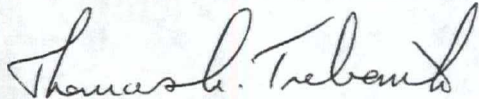
RE Perma-Fix of Dayton, Inc. (PFD)
EPA ID Number: OHD 004 274 031
RFI Quarterly Progress Report

Dear Mr. Harris:

On behalf of Perma-Fix of Dayton, Inc., I am hereby providing to you one copy of the Quarterly Progress Report for RFI activities conducted at the PFD facility in Dayton, Ohio. One copy of the Quarterly Progress report was submitted to EPA, Region 5 at the address listed in the HSWA Permit and one copy was provided directly to Mr. Tom Manning, EPA's Project Manager.

If you have any questions on this matter, or if you require any additional information, please do not hesitate to contact me at my North Canton, Ohio office. The number there is (330) 498-9750.

Sincerely,
PERMA-FIX ENVIRONMENTAL SERVICES, INC.



Thomas A. Trebonik, PG
Director of Compliance, Safety and Health

cc: Roger Randall, PESI
Jeff Pocisk, PFD
Thomas Manning, EPA

PERMA-FIX[®]
ENVIRONMENTAL SERVICES, INC

April 10, 2000

Mr. Thomas Manning
Project Manager
Waste Management Branch
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

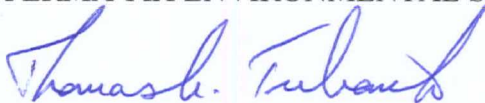
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Thomas A. Trebonik, PG
Director of Compliance, Safety and Health

cc: Roger Randall, PESI
Jeff Pocisk, PFD
Phil Harris, OEPA

PERMA-FIX[®]
ENVIRONMENTAL SERVICES, INC

April 10, 2000

Mr. Phil Harris
Ohio Environmental Protection Agency
Division of Hazardous Waste Management
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911

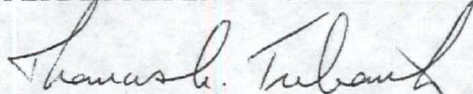
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PERMA-FIX ENVIRONMENTAL SERVICES, INC.



Thomas A. Trebonik, PG
Director of Compliance, Safety and Health

cc: Roger Randall, PESI
Jeff Pocisk, PFD
Thomas Manning, EPA

PERMA-FIX[®]
ENVIRONMENTAL SERVICES, INC.

April 10, 2000

Waste Management Branch, DRP-8J
Waste, Pesticides and Toxics Division
U.S. EPA, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604
ATTN: OH/MN/WI Section

RE: Perma-Fix of Dayton, Inc. (PFD)
EPA ID Number: OHD 004 274 031
RFI Quarterly Progress Report

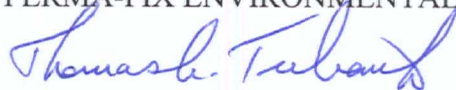
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Thomas A. Trebonik, PG
Director of Compliance, Safety and Health

cc: Mr. Thomas Manning, EPA
Mr. Phil Harris, OEPA
Mr. Roger Randall, PESI
Mr. Jeff Pocisk, PFD

RECEIVED
APR 12 2000

WASTE MANAGEMENT BRANCH
Waste, Pesticides & Toxics Division
U.S. EPA - REGION 5

**QUARTERLY PROGRESS REPORT
RCRA FACILITY INVESTIGATION**

**PERMA-FIX OF DAYTON, INC.
300 South west End Avenue
Dayton, Ohio 45427**

EPA ID Number OHD 004 274 031

April 2000

CERTIFICATION IN ACCORDANCE WITH 40 CFR 270.11(d)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Thomas A. Trebonik, CPGS
Director of Compliance, Safety and Health
Perma-Fix Environmental Services, Inc.

Date: April 10, 2000

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A.	Summary of Sample Collection/Analysis Activities	A-1
B.	Executive Summary-Detection Highlights	B-1
C.	Water Level Data	C-1
D.	Laboratory Performance Evaluation Results	D-1

I. INTRODUCTION

Perma-Fix of Dayton, Inc. (PFD) conducts hazardous waste management activities at its facility located in Dayton, Ohio in accordance with an Ohio Hazardous Waste (RCRA) Permit renewed December 29, 1995 (ID No. OHD 004 274 031) and a final Federal (HSWA) Permit effective February 24, 1996. The HSWA Permit specifically requires development of a RCRA Facility Investigation (RFI) Workplan to conduct investigations of several Solid Waste Management Units (SWMUs) previously identified at the facility.

After numerous conversations, meetings and discussions with personnel at the United States Environmental Protection Agency (US EPA) Region 5 Office in Chicago, Illinois, the RFI Workplan with an associated Quality Assurance Project Plan (QAPjP) was prepared, revised and submitted to the US EPA for final approval. The RFI Workplan and QAPjP were approved by EPA on July 22, 1999.

PFD provided additional information, as requested in the RFI Workplan approval letter, and began implementation of the RFI Workplan. Necessary clarification on certain procedures to be followed for field and laboratory activities and scheduling conflicts associated with project identified drilling and laboratory subcontractors, caused a delay in mobilization for the RFI field related activities. On-site field data collection activities commenced on January 17, 2000.

In accordance with the RFI Workplan and HSWA Permit condition III.F, Perma-Fix of Dayton, Inc. is hereby submitting this Quarterly Progress Report. This Progress Report provides all of the information required to be submitted by the RFI Workplan and HSWA Permit conditions and contains and details the work activity completed during the previous quarter; copies of all pertinent data from the work completed; summaries of all findings; summaries of all problems encountered and actions taken to rectify the problems; and the projected work activity for the next reporting period.

II. RFI WORKPLAN IMPLEMENTATION (Phase I)

II.A Work Activity Completed

On January 15, 2000, personnel were mobilized to Dayton, Ohio to begin the field data collection activities. Actual field sampling activities began on January 17, 2000. During the period of January 17-20, 2000 a total of 65 soil samples (including duplicate and replicate samples) were collected from 17 previously identified SWMUs. A model 420U Geoprobe®, which uses direct push technology, was used to complete 20 soil borings and collect the soil samples for laboratory analysis. In accordance with the procedures outlined and discussed in the RFI Workplan, a total of 36 soil samples were prepared and forwarded to the Quanterra, Inc. laboratory in North Canton, Ohio for analysis. Analysis completed on soil samples during the reporting period included a determination of the Volatile Organic Compound (VOC) and Semi-

Volatile Organic Compound (SVOC) concentrations within the soil samples. In addition, a determination of the total percent solids content of the soil samples was completed. The VOC, SVOC and % solids concentrations were determined using Methods SW846-8260B, SW846-8270C and MCAWW 160.3, modified, respectively. Attachment A provides a summary of the soil collection/analysis activities conducted at the PFD facility. Attachment B provides an Executive Summary-Detection Highlights of the laboratory analytical results as provided by Quanterra, Inc. The Executive Summary includes general information on the sample analyzed, the results of analysis, laboratory reporting limits, units of measurement and analytical method.

Volatile Organic and Semi-volatile Organic compounds were detected in many of the 36 samples analyzed. However, the concentrations of compounds detected are generally very low with the reported concentration result often lying between the Method Detection Limit (MDL) and the Laboratory Reporting Limit. This is true for about 78% of the total number of compounds detected in the 36 samples analyzed. In all cases however, the concentrations of the compounds detected in the soil samples were well below (often orders of magnitude below) EPA Region 3, Residential Risk Based Concentrations (RBCs) for the individual compounds.

Additional field activities completed during this reporting period related to the Groundwater Assessment portion of the Workplan. On January 27, 2000, ground-water elevation data was collected from three wells previously installed at the PFD facility. Attachment C presents the depth to water as determined from the top of each of the well casings. In addition, to gauging the wells, contact was made with professional surveying companies within the Dayton area and a contractual arrangement completed with one of the firms to gather and establish vertical and horizontal data for each of the wells. It is anticipated that the surveying activities will be completed in early April, the beginning of the next reporting period.

Limited source characterization and potential receptor identification activities were also completed during this reporting period. The activities generally related to information and data gathering in preparation for compiling the Draft RFI Final Report and Summary.

II.B. Changes made to the RFI

Because the original RFI Workplan and QAPjP were written prior to the acceptance and availability of the EnCore® Sampler (a method preferred by Region 5 for collecting soil samples for VOC analysis) the method of sampling and analysis for VOCs was modified from the procedures identified in the RFI Workplan. Discussions were held with EPA prior to implementing the changes and appropriate QA/QC documentation of laboratory procedures were forwarded to EPA.

The QAPjP for the facility RFI Workplan also addressed the use of a standard reference material (SRM) for assessing the quality of the data resulting from the field sampling and analytical programs. However, a SRM for volatile organic compounds using the EnCore® Sampler

procedure is not available. As an alternative, in order to assess the quality of data obtained from the laboratory, Environmental Resource Associates was contracted to conduct a Performance Evaluation of Quanterra, Inc. through their QuiK™ Response Performance Evaluation Program. The results of the Performance Evaluation are included in Attachment D.

II.C. Percent Complete

Based on the original 30 week proposed schedule for the Perma-Fix of Dayton, Inc. RFI, it is estimated that the Project is about 1/3 or 33 1/3% complete.

II.D. Public Contact

There was no contact made with the general public during this reporting period. All RFI activities were conducted within the confines of the PFD facility property. As discussed within the Community Relations Plan required for the RFI Workplan, information generated during the RFI process (including the Quarterly Progress Reports) will be placed in the information Repository. It is anticipated at this time that the facility will act as the information repository. A notice will be mailed to interested parties, as identified on the facility mailing list maintained by OEPA, providing details regarding access to the information repository.

II.E. Changes in Personnel

Effective March 1, 2000, Mr. Jeffery J. Armstrong has replaced Mr. Jerry McEldowney as the facility Compliance Officer. Mr. Armstrong can be reached at (937) 268-6501. All other key personnel identified as responsible for implementation of the RFI remain the same.

II.F. Problems Encountered

The only problem encountered during the field related activities involved the depth to which samples could effectively be collected with the Geoprobe® unit used. The dense nature of the native clay immediately below the surficial materials at the site caused the Geoprobe® acetate core barrels (used to collect the soil samples) to twist and become ineffective. Attempts to gather site specific stratigraphic data deeper than about 12 feet below the ground surface were generally unsuccessful.

The solution to this problem was to limit soil collection activities at the depth free water was first encountered. This generally occurred at 8 to 12 feet below ground surface, in a wet gravelly clay which, at times, contained up to 6" of a medium to coarse grained saturated sand layer. The fact

that free water was encountered in all boreholes at a depth close to the apparent phreatic water table (see Attachment C), the decision to limit the depth of sample collection was still consistent with the RFI Workplan. The Workplan required samples to be collected in four foot increments to approximately the top of the local water table.

Field observations of the dense, subsurface clay having no visual impacts at depth, also supported limiting the depth of soil collection activities.

II.G. Reports and Data generated during the reporting Period

Other than the attachments included with this Quarterly Progress Report, no other reports have been generated during this reporting period.

III. PROJECTED WORK

Projected work activities anticipated for the next reporting period include completing the ground-water assessment in accordance with the RFI Workplan. This will include the surveying activities discussed in Section II.A.

Work will continue on establishing the environmental setting of the site which will include characterization of the hydro-geologic setting and general soil conditions of the site. Work will also be conducted to finalize source characterization and potential receptor identification.

Data verification and evaluation activities will continue and all data will be compiled into the Draft RFI Final Report and Summary to be submitted to Region 5 EPA and the Ohio EPA for review.

ATTACHMENT A

Summary of Sample Collection/Analysis Activities

Summary of Soil Sample Collection/Analysis Activities
Perma-Fix of Dayton, Inc.

SWMU	STATION	SAMPLE ID	DESCRIPTION	DEPTH SAMPLED		LAB ANALYSIS
				VOCS	SVOCS	
39	1	S00001	Shallow	2.0'	0.0-4.0'	Yes
	1	S00002	Duplicate of 1	2.0'	0.0-4.0'	Yes
	1	S00003	Deep	6.0'	4.0-8.0'	
	1	S00004	Duplicate of 3	6.0'	4.0-8.0'	
	2	S00005	Shallow	2.0'	0.0-4.0'	Yes
	2	S00006	Deep	6.0'	4.0-8.0'	
	2	S00007	Duplicate of 6	6.0'	4.0-8.0'	
	3	S00008	Shallow	2.0'	0.0-4.0'	Yes
	3	S00009	Deep	6.0'	4.0-8.0'	
	3	S00010	Duplicate of 9	6.0'	4.0-8.0'	
	4	S00011	Shallow	2.0'	0.0-4.0'	Yes
	4	S00012	Deep	6.0'	4.0-8.0'	
	4	S00013	Duplicate of 12	6.0'	4.0-8.0'	
36	1	S00014	Deep	6.0'	4.0-8.0'	Yes
	1	S00015	Duplicate of 14	6.0'	4.0-8.0'	Yes
33,45,A	1	S00016	Shallow	2.0'	0.0-4.0'	Yes
	1	S00017	Deep	6.0'	4.0-8.0'	
	1	S00018	Duplicate of 17	6.0'	4.0-8.0'	
	2	S00019	Shallow	2.0'	1.5-4.0'	Yes
	2	S00020	Deep	6.0'	4.0-8.0'	
	2	S00021	Duplicate of 20	6.0'	4.0-8.0'	Yes
30,31	1	S00022	Shallow	2.0'	1.5-4.0'	Yes
	1	S00023	Duplicate of 22	2.0'	1.5-4.0'	Yes
	1	S00024	Deep	6.0'	4.0-8.0'	
	1	S00025	Duplicate of 24	6.0'	4.0-8.0'	
	2	S00026	Shallow	2.0'	2.0-4.0'	Yes
	2	S00027	Deep	6.0'	4.0-8.0'	
	2	S00028	Duplicate of 27	6.0'	4.0-8.0'	
29	1	S00029	No Sample	NA	NA	
	1	S00030	No Sample	NA	NA	
	1	S00031	Deep	6.0'	4.0-8.0'	Yes
	1	S00032	Duplicate of 31	6.0'	4.0-8.0'	Yes
34	1	S00033	Shallow	2.0'	2.0-4.0'	Yes
	1	S00034	Duplicate of 33	2.0'	2.0-4.0'	Yes
	1	S00035	Replicate of 33	2.0'	2.0-4.0'	Yes
	1	S00036	Deep	6.0'	4.0-8.0'	
	1	S00037	Duplicate of 36	6.0'	4.0-8.0'	
	2	S00038	Shallow	2.5'	2.5-4.0'	Yes
	2	S00039	Deep	6.0'	4.0-8.0'	
	2	S00040	Duplicate of 39	6.0'	4.0-8.0'	
32	1	S00041	Shallow	2.5'	2.5-4.0'	Yes
	1	S00042	Deep	6.0'	4.0-8.0'	
	1	S00043	Duplicate of 42	6.0'	4.0-8.0'	

**Table 1 - Continued. Summary of Soil Sample Collections / Analysis
for PFD, Inc., Dayton, Ohio**

SWMU	STATION	SAMPLE ID	DESCRIPTION	DEPTH SAMPLED		LAB ANALYSIS
				VOCS	SVOCS	
28	1	S00044	No Sample	NA	NA	
	1	S00045	Deep	6.0'	4.0-8.0'	Yes
	1	S00046	Duplicate of 45	6.0'	4.0-8.0'	Yes
B	1	S00047	Shallow	2.0'	0.5-4.0'	Yes
	1	S00048	Duplicate of 47	2.0'	0.5-4.0'	Yes
	1	S00049	Deep	6.0'	4.0-8.0'	Yes
	1	S00050	Duplicate of 49	6.0'	4.0-8.0'	Yes
37	1	S00051	Shallow	2.0'	0.0-4.0'	Yes
	1	S00052	Deep	6.0'	4.0-8.0'	
	1	S00053	Duplicate of 52	6.0'	4.0-8.0'	
40	1	S00054	Shallow	2.0'	0.0-4.0'	Yes
	1	S00055	Deep	6.0'	4.0-8.0'	
	1	S00056	Duplicate of 55	6.0'	4.0-8.0'	
	2	S00057	Shallow	2.0'	1.5-4.0'	Yes
	2	S00058	Deep	6.0'	4.0-8.0'	
	2	S00059	Duplicate of 58	6.0'	4.0-8.0'	
B	2	S00060	Shallow	3.0'	3.0-4.0'	Yes
	2	S00061	Deep	6.0'	4.0-8.0'	
	2	S00062	Duplicate of 61	6.0'	4.0-8.0'	
	3	S00063	Shallow	2.0'	0.5-4.0'	Yes
	3	S00064	Deep	5.0'	4.0-6.0'	Yes
	3	S00065	Duplicate of 64	5.0'	4.0-6.0'	Yes
	4	S00066	Shallow	2.0'	2.0-4.0'	Yes
	4	S00067	Deep	5.0'	4.0-6.5'	Yes
	4	S00068	Duplicate of 67	5.0'	4.0-6.5'	Yes

ATTACHMENT B

Executive Summary-Detection Highlights

EXECUTIVE SUMMARY - Detection Highlights

AQA180175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S00001 01/17/00 11:45 001				
Methylene chloride	1.2 J,B	5.6	ug/kg	SW846 8260B
Tetrachloroethene	0.72 J	5.6	ug/kg	SW846 8260B
Percent Solids	80.0	0.10	%	MCAWW 160.3 MOD
S00002 01/17/00 12:00 002				
bis(2-Ethylhexyl) phthalate	390 J	2100	ug/kg	SW846 8270C
Methylene chloride	1.4 J,B	5.6	ug/kg	SW846 8260B
Percent Solids	78.2	0.10	%	MCAWW 160.3 MOD
S00005 01/17/00 13:45 005				
Methylene chloride	1.3 J,B	5.6	ug/kg	SW846 8260B
Trichloroethene	0.60 J	5.6	ug/kg	SW846 8260B
Tetrachloroethene	0.50 J	5.6	ug/kg	SW846 8260B
Toluene	0.41 J	5.6	ug/kg	SW846 8260B
Ethylbenzene	0.39 J	5.6	ug/kg	SW846 8260B
Styrene	1.0 J	5.6	ug/kg	SW846 8260B
Percent Solids	78.9	0.10	%	MCAWW 160.3 MOD
S00008 01/17/00 14:45 008				
Methylene chloride	1.2 J,B	5.6	ug/kg	SW846 8260B
Percent Solids	78.7	0.10	%	MCAWW 160.3 MOD
S00011 01/17/00 15:40 011				
Phenanthrene	61 J	380	ug/kg	SW846 8270C
Fluoranthene	190 J	380	ug/kg	SW846 8270C
Pyrene	140 J	380	ug/kg	SW846 8270C
Benzo(a)anthracene	70 J	380	ug/kg	SW846 8270C
Chrysene	93 J	380	ug/kg	SW846 8270C
Benzo(b)fluoranthene	180 J	380	ug/kg	SW846 8270C
Benzo(k)fluoranthene	58 J	380	ug/kg	SW846 8270C
Benzo(a)pyrene	110 J	380	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	78 J	380	ug/kg	SW846 8270C
Benzo(ghi)perylene	80 J	380	ug/kg	SW846 8270C
Methylene chloride	1.3 J,B	5.1	ug/kg	SW846 8260B
Benzene	0.49 J	5.1	ug/kg	SW846 8260B
Ethylbenzene	1.6 J	5.1	ug/kg	SW846 8260B
Xylenes (total)	4.3 J	10	ug/kg	SW846 8260B
Percent Solids	85.0	0.10	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

AQA180175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S00014 01/17/00 16:45 014				
Methylene chloride	1.3 J,B	5.9	ug/kg	SW846 8260B
Acetone	20 J,B	24	ug/kg	SW846 8260B
2-Butanone	4.7 J,B	24	ug/kg	SW846 8260B
Trichloroethene	1.2 J	5.9	ug/kg	SW846 8260B
Tetrachloroethene	3.0 J	5.9	ug/kg	SW846 8260B
Toluene	0.60 J	5.9	ug/kg	SW846 8260B
Ethylbenzene	0.34 J	5.9	ug/kg	SW846 8260B
Styrene	0.31 J	5.9	ug/kg	SW846 8260B
Percent Solids	79.1	0.10		MCAWW 160.3 MOD
S00015 01/17/00 16:55 015				
Phenanthrene	47 J	400	ug/kg	SW846 8270C
Fluoranthene	140 J	400	ug/kg	SW846 8270C
Pyrene	110 J	400	ug/kg	SW846 8270C
Benzo(a)anthracene	57 J	400	ug/kg	SW846 8270C
Chrysene	70 J	400	ug/kg	SW846 8270C
Benzo(b)fluoranthene	140 J	400	ug/kg	SW846 8270C
Benzo(k)fluoranthene	50 J	400	ug/kg	SW846 8270C
Benzo(a)pyrene	87 J	400	ug/kg	SW846 8270C
Benzo(ghi)perylene	54 J	400	ug/kg	SW846 8270C
Methylene chloride	1.3 J,B	5.6	ug/kg	SW846 8260B
Acetone	25 B	23	ug/kg	SW846 8260B
2-Butanone	4.6 J,B	23	ug/kg	SW846 8260B
Toluene	0.41 J	5.6	ug/kg	SW846 8260B
Percent Solids	82.4	0.10		MCAWW 160.3 MOD

EXECUTIVE SUMMARY - Detection Highlights

A0A190127

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
S00016 01/18/00 09:45 001				
Percent Solids	83.8	0.10	%	MCAWW 160.3 MOD
S00019 01/18/00 10:35 004				
Percent Solids	75.2	0.10	%	MCAWW 160.3 MOD
S00021 01/18/00 11:00 006				
Percent Solids	87.7	0.10	%	MCAWW 160.3 MOD
S00022 01/18/00 11:30 007				
Phenanthrene	62 J	360	ug/kg	SW846 8270C
Percent Solids	87.8	0.10	%	MCAWW 160.3 MOD
S00023 01/18/00 11:45 008				
Percent Solids	83.6	0.10	%	MCAWW 160.3 MOD
S00026 01/18/00 12:10 011				
Percent Solids	78.2	0.10	%	MCAWW 160.3 MOD
S00031 01/18/00 15:30 014				
Acetone	8.3 J,B	18	ug/kg	SW846 8260B
Benzene	0.64 J	4.5	ug/kg	SW846 8260B
1,1-Dichloroethane	3.8 J	4.5	ug/kg	SW846 8260B
1,2-Dichloroethane (total)	16	4.5	ug/kg	SW846 8260B
Ethylbenzene	0.33 J	4.5	ug/kg	SW846 8260B
Methylene chloride	1.0 J	4.5	ug/kg	SW846 8260B
Styrene	0.68 J	4.5	ug/kg	SW846 8260B
Toluene	0.43 J	4.5	ug/kg	SW846 8260B
Vinyl chloride	3.7 J	9.0	ug/kg	SW846 8260B
Percent Solids	87.6	0.10	%	MCAWW 160.3 MOD
S00032 01/18/00 15:40 015				
Vinyl chloride	1.8 J	8.5	ug/kg	SW846 8260B
Methylene chloride	0.93 J	4.3	ug/kg	SW846 8260B
Acetone	5.4 J,B	17	ug/kg	SW846 8260B
1,1-Dichloroethane	0.78 J	4.3	ug/kg	SW846 8260B

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EXECUTIVE SUMMARY - Detection Highlights

AQA190127

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S00032 01/18/00 15:40 015				
1,1-Dichloroethane	2.7 J	4.3	ug/kg	SW846 8260B
1,2-Dichloroethene (total)	17	4.3	ug/kg	SW846 8260B
2-Butanone	1.2 J,B	17	ug/kg	SW846 8260B
Trichloroethene	15	4.3	ug/kg	SW846 8260B
Benzene	0.37 J	4.3	ug/kg	SW846 8260B
Percent Solids	88.2	0.10	%	MCAWW 160.3 MOD
S00033 01/18/00 16:00 016				
Acetone	38 B	24	ug/kg	SW846 8260B
Benzene	4.0 J	5.9	ug/kg	SW846 8260B
2-Butanone	8.8 J,B	24	ug/kg	SW846 8260B
Ethylbenzene	14	5.9	ug/kg	SW846 8260B
Methylene chloride	1.4 J	5.9	ug/kg	SW846 8260B
Toluene	1.8 J	5.9	ug/kg	SW846 8260B
Vinyl chloride	0.37 J	12	ug/kg	SW846 8260B
Xylenes (total)	60	12	ug/kg	SW846 8260B
Percent Solids	77.7	0.10	%	MCAWW 160.3 MOD
S00034 01/18/00 16:10 017				
bis(2-Ethylhexyl) phthalate	81 J	430	ug/kg	SW846 8270C
Acetone	41 B	24	ug/kg	SW846 8260B
Benzene	3.2 J	6.0	ug/kg	SW846 8260B
2-Butanone	9.5 J,B	24	ug/kg	SW846 8260B
1,1-Dichloroethene	2.7 J	6.0	ug/kg	SW846 8260B
Ethylbenzene	1.6 J	6.0	ug/kg	SW846 8260B
Methylene chloride	0.77 J	6.0	ug/kg	SW846 8260B
Styrene	0.54 J	6.0	ug/kg	SW846 8260B
Toluene	1.1 J	6.0	ug/kg	SW846 8260B
Xylenes (total)	3.0 J	12	ug/kg	SW846 8260B
Percent Solids	77.2	0.10	%	MCAWW 160.3 MOD
S00035 01/18/00 16:20 018				
bis(2-Ethylhexyl) phthalate	190 J	430	ug/kg	SW846 8270C
Acetone	61 B	24	ug/kg	SW846 8260B
Benzene	5.5 J	5.9	ug/kg	SW846 8260B
2-Butanone	16 J,B	24	ug/kg	SW846 8260B
1,1-Dichloroethene	0.87 J	5.9	ug/kg	SW846 8260B

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EXECUTIVE SUMMARY - Detection Highlights

AOA190127

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S00035 01/18/00 16:20 018				
Ethylbenzene	2.7 J	5.9	ug/kg	SW846 8260B
Methylene chloride	1.0 J	5.9	ug/kg	SW846 8260B
Toluene	2.0 J	5.9	ug/kg	SW846 8260B
Vinyl chloride	0.89 J	12	ug/kg	SW846 8260B
Xylenes (total)	4.6 J	12	ug/kg	SW846 8260B
Percent Solids	77.4	0.10	%	MCAWW 160.3 MOD
S00038 01/18/00 16:45 021				
Acenaphthene	84 J	410	ug/kg	SW846 8270C
Phenanthrene	140 J	410	ug/kg	SW846 8270C
Fluoranthene	130 J	410	ug/kg	SW846 8270C
Pyrene	150 J	410	ug/kg	SW846 8270C
Acetone	35 B	21	ug/kg	SW846 8260B
Benzene	4.6 J	5.3	ug/kg	SW846 8260B
2-Butanone	7.5 J,B	21	ug/kg	SW846 8260B
1,1-Dichloroethene	1.3 J	5.3	ug/kg	SW846 8260B
Ethylbenzene	1.8 J	5.3	ug/kg	SW846 8260B
Methylene chloride	0.79 J	5.3	ug/kg	SW846 8260B
Styrene	0.39 J	5.3	ug/kg	SW846 8260B
Toluene	2.9 J	5.3	ug/kg	SW846 8260B
Xylenes (total)	6.4 J	11	ug/kg	SW846 8260B
Percent Solids	81.2	0.10	%	MCAWW 160.3 MOD

EXECUTIVE SUMMARY - Detection Highlights

A0A200139

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
S00041 01/19/00 09:30 001				
2-Methylnaphthalene	5100 J	18000	ug/kg	SW846 8270C
2-Butanone	750 J,B	1600	ug/kg	SW846 8260B
Ethylbenzene	2200	400	ug/kg	SW846 8260B
Xylenes (total)	170 J	800	ug/kg	SW846 8260B
Percent Solids	92.4	0.10	%	MCAWW 160.3 MOD
S00045 01/19/00 11:00 004				
2-Methylnaphthalene	3700	750	ug/kg	SW846 8270C
Acenaphthene	150 J	750	ug/kg	SW846 8270C
Phenanthrene	640 J	750	ug/kg	SW846 8270C
Fluoranthene	210 J	750	ug/kg	SW846 8270C
Pyrene	200 J	750	ug/kg	SW846 8270C
2-Butanone	480 J,B	810	ug/kg	SW846 8260B
Percent Solids	88.5	0.10	%	MCAWW 160.3 MOD
S00046 01/19/00 11:15 005				
Naphthalene	220 J	380	ug/kg	SW846 8270C
2-Methylnaphthalene	550	380	ug/kg	SW846 8270C
2-Butanone	520 J,B	970	ug/kg	SW846 8260B
Percent Solids	87.7	0.10	%	MCAWW 160.3 MOD
S00047 01/19/00 11:45 006				
Naphthalene	1300 J	1600	ug/kg	SW846 8270C
2-Methylnaphthalene	6700	1600	ug/kg	SW846 8270C
Phenanthrene	650 J	1600	ug/kg	SW846 8270C
Benzene	72 J	260	ug/kg	SW846 8260B
2-Butanone	530 J,B	1100	ug/kg	SW846 8260B
Ethylbenzene	50 J	260	ug/kg	SW846 8260B
Xylenes (total)	82 J	530	ug/kg	SW846 8260B
Percent Solids	83.2	0.10	%	MCAWW 160.3 MOD
S00048 01/19/00 11:55 007				
Naphthalene	120 J	380	ug/kg	SW846 8270C
2-Methylnaphthalene	430	380	ug/kg	SW846 8270C
Benzene	66 J	250	ug/kg	SW846 8260B
2-Butanone	440 J,B	980	ug/kg	SW846 8260B
Ethylbenzene	67 J	250	ug/kg	SW846 8260B
Xylenes (total)	61 J	490	ug/kg	SW846 8260B
Percent Solids	86.5	0.10	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

A0A200139

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S00049 01/19/00 12:00 008				
Naphthalene	490	390	ug/kg	SW846 8270C
2-Methylnaphthalene	3200	390	ug/kg	SW846 8270C
Fluorene	220 J	390	ug/kg	SW846 8270C
Phenanthrene	540	390	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	77 J	390	ug/kg	SW846 8270C
2-Butanone	430 J,B	970	ug/kg	SW846 8260B
Percent Solids	83.7	0.10	%	MCAWW 160.3 MOD
S00050 01/19/00 12:10 009				
Naphthalene	81 J	360	ug/kg	SW846 8270C
2-Methylnaphthalene	500	360	ug/kg	SW846 8270C
Fluorene	75 J	360	ug/kg	SW846 8270C
Phenanthrene	160 J	360	ug/kg	SW846 8270C
2-Butanone	410 J,B	880	ug/kg	SW846 8260B
Percent Solids	91.6	0.10	%	MCAWW 160.3 MOD
S00051 01/19/00 14:00 010				
2-Methylnaphthalene	6900 J	19000	ug/kg	SW846 8270C
1,1-Dichloroethene	1.3 J	5.0	ug/kg	SW846 8260B
Tetrachloroethene	2.9 J	5.0	ug/kg	SW846 8260B
Toluene	0.30 J	5.0	ug/kg	SW846 8260B
Percent Solids	86.5	0.10	%	MCAWW 160.3 MOD
S00054 01/19/00 15:00 013				
1,1-Dichloroethene	1.0 J	6.3	ug/kg	SW846 8260B
Percent Solids	84.0	0.10	%	MCAWW 160.3 MOD
S00057 01/19/00 15:45 016				
Acetone	25 B	19	ug/kg	SW846 8260B
1,1-Dichloroethene	1.1 J	4.7	ug/kg	SW846 8260B
1,1-Dichloroethane	1.2 J	4.7	ug/kg	SW846 8260B
2-Butanone	5.4 J,B	19	ug/kg	SW846 8260B
Benzene	0.81 J	4.7	ug/kg	SW846 8260B
Toluene	0.83 J	4.7	ug/kg	SW846 8260B
Ethylbenzene	0.31 J	4.7	ug/kg	SW846 8260B
Xylenes (total)	1.2 J	9.4	ug/kg	SW846 8260B
Percent Solids	85.4	0.10	%	MCAWW 160.3 MOD

EXECUTIVE SUMMARY - Detection Highlights

A0A210141

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
S00060 01/20/00 10:15 001				
2-Methylnaphthalene	53 J	360	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	53 J	360	ug/kg	SW846 8270C
Acetone	140 B	19	ug/kg	SW846 8260B
2-Butanone	10 J,B	19	ug/kg	SW846 8260B
Benzene	25	4.6	ug/kg	SW846 8260B
Toluene	8.5	4.6	ug/kg	SW846 8260B
Ethylbenzene	23	4.6	ug/kg	SW846 8260B
Xylenes (total)	120	9.3	ug/kg	SW846 8260B
Percent Solids	92.8	0.10	%	MCAWW 160.3 MOD
S00063 01/20/00 11:15 004				
Naphthalene	2500 J	4000	ug/kg	SW846 8270C
2-Methylnaphthalene	9600	4000	ug/kg	SW846 8270C
Fluorene	740 J	4000	ug/kg	SW846 8270C
Phenanthrene	1600 J	4000	ug/kg	SW846 8270C
Benzene	220 J	370	ug/kg	SW846 8260B
2-Butanone	670 J,B	1500	ug/kg	SW846 8260B
Ethylbenzene	940	370	ug/kg	SW846 8260B
Toluene	120 J	370	ug/kg	SW846 8260B
Xylenes (total)	2500	750	ug/kg	SW846 8260B
Percent Solids	82.5	0.10	%	MCAWW 160.3 MOD
S00064 01/20/00 11:30 005				
Naphthalene	550	370	ug/kg	SW846 8270C
2-Methylnaphthalene	2700	370	ug/kg	SW846 8270C
Acenaphthene	82 J	370	ug/kg	SW846 8270C
Fluorene	190 J	370	ug/kg	SW846 8270C
Phenanthrene	480	370	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	140 J	370	ug/kg	SW846 8270C
2-Butanone	600 J,B	1900	ug/kg	SW846 8260B
Percent Solids	88.8	0.10	%	MCAWW 160.3 MOD
S00065 01/20/00 11:45 006				
Naphthalene	400	370	ug/kg	SW846 8270C
2-Methylnaphthalene	1700	370	ug/kg	SW846 8270C
Acenaphthene	52 J	370	ug/kg	SW846 8270C
Fluorene	120 J	370	ug/kg	SW846 8270C
Phenanthrene	290 J	370	ug/kg	SW846 8270C

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EXECUTIVE SUMMARY - Detection Highlights

AOA210141

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S00065 01/20/00 11:45 006				
bis(2-Ethylhexyl) phthalate	90 J	370	ug/kg	SW846 8270C
2-Butanone	630 J,B	1800	ug/kg	SW846 8260B
Xylenes (total)	110 J	910	ug/kg	SW846 8260B
Percent Solids	90.0	0.10	%	MCAWW 160.3 MOD
S00066 01/20/00 12:15 007				
Naphthalene	5800	3700	ug/kg	SW846 8270C
2-Methylnaphthalene	18000	3700	ug/kg	SW846 8270C
Fluorene	1200 J	3700	ug/kg	SW846 8270C
Phenanthrene	2500 J	3700	ug/kg	SW846 8270C
Benzene	300 J	400	ug/kg	SW846 8260B
2-Butanone	590 J,B	1600	ug/kg	SW846 8260B
Ethylbenzene	99 J	400	ug/kg	SW846 8260B
Xylenes (total)	250 J	800	ug/kg	SW846 8260B
Percent Solids	89.5	0.10	%	MCAWW 160.3 MOD
S00067 01/20/00 12:30 008				
Naphthalene	1800	390	ug/kg	SW846 8270C
Naphthalene	1800	1600	ug/kg	SW846 8270C
2-Methylnaphthalene	8300 E	390	ug/kg	SW846 8270C
2-Methylnaphthalene	7700	1600	ug/kg	SW846 8270C
Acenaphthene	230 J	1600	ug/kg	SW846 8270C
Fluorene	550	390	ug/kg	SW846 8270C
Fluorene	500 J	1600	ug/kg	SW846 8270C
Phenanthrene	1100	390	ug/kg	SW846 8270C
Phenanthrene	1100 J	1600	ug/kg	SW846 8270C
Anthracene	84 J	390	ug/kg	SW846 8270C
Pyrene	110 J	390	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	170 J	390	ug/kg	SW846 8270C
Benzene	160 J	250	ug/kg	SW846 8260B
Ethylbenzene	270	250	ug/kg	SW846 8260B
Xylenes (total)	240 J	510	ug/kg	SW846 8260B
Percent Solids	83.9	0.10	%	MCAWW 160.3 MOD
S00068 01/20/00 12:45 009				
Naphthalene	1700	380	ug/kg	SW846 8270C
Naphthalene	1600	1500	ug/kg	SW846 8270C
2-Methylnaphthalene	7800 E	380	ug/kg	SW846 8270C

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EXECUTIVE SUMMARY - Detection Highlights

ADA210141

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
S00068 01/20/00 12:45 009				
2-Methylnaphthalene	6800	1500	ug/kg	SW846 8270C
Fluorene	470	380	ug/kg	SW846 8270C
Fluorene	420 J	1500	ug/kg	SW846 8270C
Phenanthrene	1100	380	ug/kg	SW846 8270C
Phenanthrene	980 J	1500	ug/kg	SW846 8270C
Anthracene	70 J	380	ug/kg	SW846 8270C
Pyrene	120 J	380	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	280 J	380	ug/kg	SW846 8270C
Benzene	150 J	220	ug/kg	SW846 8260B
Ethylbenzene	190 J	220	ug/kg	SW846 8260B
Xylenes (total)	200 J	440	ug/kg	SW846 8260B
Percent Solids	86.7	0.10	%	MCAWW 160.3 MOD

- J - Samples contain results between the MDL and Reporting Limit
- B - Associated Method Blank contains the target analyte at a reportable level
- E - Estimated result - Result concentration exceeds calibration range

ATTACHMENT C

Water Level Data

WATER LEVEL DATA

<u>Monitoring Well</u>	<u>Depth to Water</u>	<u>Top of Casing Elevation</u>
CPGM-1	7.87'	To be determined
CPGM-2	11.35'	To be determined
CPGM-3	11.57'	To be determined

ATTACHMENT D

Laboratory Performance Evaluation Results



ENVIRONMENTAL
RESOURCE ASSOCIATES®

February 7, 2000

Tom Trebonik
4041 Batton Street N.W.
Suite 110
North Canton, OH 44720

Dear Tom:

On January 14, 2000, Quanterra located in North Canton, Ohio, participated in ERA's QuiK™ Response Performance Evaluation Program. The following results were reported to ERA by Quanterra for the PE standard, lot 01130002. The Certified Values and the QuiK™ Response Acceptance Limits were not available to Quanterra.

If you have any questions, please contact Shawn Kassner, InterLaB™ Administrator, or me at 1-800-372-0122.

Sincerely,

Roland P. Bruggeman
InterLaB™ Chemist

rpb
attachments



ENVIRONMENTAL
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QuiK™ Response PE Standards

Final Report

Volatiles in Soil

Customer: Quanterra
Lot Number: 01130002
State ID Number: OH00048

Parameter	Units	Reported Value	Certified Value	QuiK™ Response Limits	Comment
Benzene	ug/Kg	20.2	21.6	16.9 - 27.0	Acceptable
Bromodichloromethane	ug/Kg	118	120	95.5 - 150	Acceptable
Bromoform	ug/Kg	122	118	91.2 - 156	Acceptable
Carbon tetrachloride	ug/Kg	63.4	71.9	53.7 - 93.1	Acceptable
Chlorobenzene	ug/Kg	82.0	87.5	71.4 - 108	Acceptable
Chlorodibromomethane	ug/Kg	50.6	53.4	41.4 - 68.2	Acceptable
Chloroform	ug/Kg	55.4	60.4	46.7 - 75.9	Acceptable
1,2-Dichlorobenzene	ug/Kg	N/A	38.8	30.2 - 49.2	No Evaluation
1,3-Dichlorobenzene	ug/Kg	N/A	24.1	18.5 - 30.6	No Evaluation
1,4-Dichlorobenzene	ug/Kg	N/A	51.1	39.3 - 66.9	No Evaluation
1,2-Dichloroethane	ug/Kg	59.0	63.8	49.9 - 80.8	Acceptable
1,2-Dichloropropane	ug/Kg	56.6	60.4	47.3 - 73.9	Acceptable
Ethylbenzene	ug/Kg	22.5	23.6	18.9 - 30.1	Acceptable
2-Hexanone	ug/Kg	106	100	55.3 - 161	Acceptable
Methylene chloride	ug/Kg	71.7	102	67.2 - 134	Acceptable
4-Methyl-2-pentanone (MIBK)	ug/Kg	100	90.4	62.6 - 128	Acceptable
Tetrachloroethylene	ug/Kg	28.3	31.8	24.2 - 41.0	Acceptable
Toluene	ug/Kg	19.1	21.0	16.9 - 25.7	Acceptable
1,1,1-Trichloroethane	ug/Kg	16.0	18.0	13.7 - 22.7	Acceptable
Trichloroethylene	ug/Kg	75.9	84.6	62.0 - 104	Acceptable
Xylenes, total	ug/Kg	72.8	76.4	61.5 - 97.7	Acceptable

*Acetone and 2-Butanone were reported as false positives.

Results reported by: Dorothy J. Leeson - Quanterra

Date of Report: 2/7/00



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QuiK™ Response PE Standards

Final Report

Base/Neutrals in Soil

Customer:
Lot Number:
State ID Number:

Quanterra
01130002
OH00048

Parameter	Units	Reported Value	Certified Value	QuiK™ Response Limits	Comment
Acenaphthylene	ug/Kg	2010	3390	1530 - 3560	Acceptable
Anthracene	ug/Kg	1830	2870	518 - 3010	Acceptable
Benzo(a)anthracene	ug/Kg	3200	3910	1310 - 4140	Acceptable
Chrysene	ug/Kg	2110	2810	1140 - 3120	Acceptable
Dibenzofuran	ug/Kg	6240	6900	2390 - 7380	Acceptable
1,2-Dichlorobenzene	ug/Kg	7900	9660	3890 - 10100	Acceptable
1,3-Dichlorobenzene	ug/Kg	5310	6780	2660 - 7120	Acceptable
Diethylphthalate	ug/Kg	6970	7710	2930 - 8790	Acceptable
Dimethylphthalate	ug/Kg	7880	9340	4790 - 9810	Acceptable
2,4-Dinitrotoluene	ug/Kg	8760	9250	2730 - 9710	Acceptable
bis(2-Ethylhexyl)phthalate	ug/Kg	6290	7890	3210 - 9730	Acceptable
Naphthalene	ug/Kg	8790	11100	1640 - 11700	Acceptable
Pyrene	ug/Kg	5770	7590	2460 - 8440	Acceptable
1,2,4-Trichlorobenzene	ug/Kg	3900	5560	725 - 5840	Acceptable

*1,4-Dichlorobenzene was reported as a false positive.

Results reported by:

Dorothy J. Leeson - Quanterra

Date of Report:

2/7/00



ENVIRONMENTAL
RESOURCE ASSOCIATES®

QuiK™ Response PE Standards

Final Report

Acids in Soil

Customer: Quanterra
Lot Number: 01130002
State ID Number: OH00048

Parameter	Units	Reported Value	Certified Value	QuiK™ Response Limits	Comment
4-Chloro-3-methylphenol	ug/Kg	6620	9170	2810 - 9630	Acceptable
2-Chlorophenol	ug/Kg	5520	7830	3210 - 8220	Acceptable
2,4-Dichlorophenol	ug/Kg	5860	8700	1510 - 9140	Acceptable
Pentachlorophenol	ug/Kg	4290	10700	1930 - 11600	Acceptable
2,4,6,-Trichlorophenol	ug/Kg	5480	7810	1330 - 8200	Acceptable

Results reported by: Dorothy J. Leeson - Quanterra

Date of Report: 2/7/00